

**WHAT IS CLAIMED IS:**

1. A deburring tool for use in conjunction with a threading tap,  
comprising:

a tap;

5 tapping threads on said tap;

helical flutes on said tap overlaid on said tapping threads;

a cutting member fitted over a periphery of said tap;

means for resiliently urging said cutting member toward an outer end of  
said tap;

10 means in said cutting member for guiding in said helical flutes to rotate  
said cutting member as said cutting member is forced up said tap against  
urging of said means for resiliently urging;

at least one cutting edge on said cutting member; and

15 said at least one cutting edge being directed to cut burs from said  
workpiece during one of withdrawal and advance of said tap in said workpiece.

2. A deburring tool according to claim 1, in which said cutting edge is  
directed to cut burs from said workpiece during withdrawal of said tap from  
said workpiece.

20 3. A deburring tool according to claim 2, wherein a helix angle of said  
helix is less than a critical angle.

4. A deburring tool according to claim 3, wherein said critical angle is  
between about zero and about 44 degrees.

25 5. A deburring tool according to claim 1, in which said cutting edge is  
directed to cut burs from said workpiece during advance of said tap into said  
workpiece.

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6. A deburring tool according to claim 5, wherein an angle of said helix is between about zero and about 60 degrees.

7. A deburring tool comprising:

a tap;

5 at least one helical flute in a surface of said tap;

a cutter body fitted on said tap;

means for guiding said cutter body along said helical flute;

resilient means for urging said cutter body toward an end of said tap;

cutting members on said cutter body; and

10 said cutting members being shaped to deburr a perimeter of a hole during one of advance of said tap into said hole and withdrawal of said tap from said hole.

8. A deburring tool according to claim 7, wherein said cutting members are shaped to deburr a perimeter of said hole during advance.

15 9. A deburring tool according to claim 8 wherein a helix angle of said helical flute is less than about 60 degrees.

10. A deburring tool according to claim 7, wherein said cutting members are shaped to deburr a perimeter of said hole during withdrawal.

20 11. A deburring tool according to claim 10 wherein a helix angle of said helical flute is less than a critical helix angle.

12. A deburring tool according to claim 10, wherein [said critical angle] is less than 45 degrees.

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